IN THE CLAIMS:

Please cancel claims 8 and 18 without prejudice or disclaimer, and amend claims 1-5, 7, 9-15, 17, 19-20 as follows:

1. (Currently Amended) A semiconductor laser comprising: a semiconductor substrate; a core region defined by an active layer formed on one side of the semiconductor substrate; and a clad region defined by at least one clad layer ~~formed on the opposite side of the substrate not having~~ overlaying the ~~core region;~~ active layer,

wherein the core region has a gain [[area]] region with a length not smaller than 18 micrometers and not greater than 200 micrometers along an optical axis of at least the core region or the clad region; at least one of the core region and the clad region has a stripe shape with a ~~stripe~~ width [[is]] modulated in ~~the vertical~~ a direction ~~against~~ perpendicular to the optical axis ~~of at least the core region or the clad region and in the parallel direction with respect to the substrate surface;~~ such that the ~~stripe~~ width is narrower in the vicinity of [[the stripe]] ends of the gain region ~~is set narrower~~ than a center portion thereof ~~cut-off width where a lateral mode is identical; and the lateral width in the horizontal direction has a portion within the gain region set wider than the cut-off width where the lateral mode is identical~~.

2. (Currently Amended) The semiconductor laser as claimed in Claim 1, wherein the center portion within the gain region ~~set wider than the cut-off width where the lateral mode is identical is~~ forms a multi-lateral-mode waveguide.

3. (Currently Amended) The semiconductor laser as claimed in Claim [[1]] 2, wherein the multi-lateral mode waveguide has a lateral width W and a waveguide length L decided so as to minimize a conversion loss accompanying mode conversion at [[the]] a junction between a waveguide mode of the multi-lateral mode waveguide and a waveguide mode of a lateral-mono mode waveguide which is optically connected to the multi-lateral mode waveguide.

4. (Currently Amended) The semiconductor laser as claimed in Claim [[1]] 2, wherein [[the]] a lateral width W and [[the]] a waveguide length L of the multi-lateral mode

waveguide, an effective refractive index n of the multi-lateral mode [[laser]] waveguide, and an operation wavelength λ are decided so as to satisfy a formula as follows:

$$0.9\ nW^2/\lambda\ [[l]] \leqq L \leqq 1.1\ nW^2/\lambda.\ [[l]]$$

5. (Currently Amended) The semiconductor laser as claimed in Claim [[1]] 2, wherein the multi-lateral mode waveguide has a lateral width W in a range from 3 to 10 micrometers.

6. (Original) The semiconductor laser as claimed in Claim 1, further comprising a reflection mirror formed by etching the clad region and the core region.

7. (Currently Amended) The ~~distribution return type~~ semiconductor laser as claimed in Claim [[1]]3, wherein a diffraction grating is formed in the lateral-mono mode waveguide portion [[and]] to provide a Bragg reflector therein ~~is formed~~.

8. (Cancelled)

9. (Currently Amended) The ~~wavelength changeable~~ semiconductor laser as claimed in Claim 7, wherein the Bragg reflector has a reflection wavelength changed by an external signal so as to artificially change the oscillation wavelength.

10. (Currently Amended) An optical module comprising at least an optical fiber for introducing light outside and a semiconductor laser that includes a semiconductor substrate; a core region defined by an active layer formed on one side of the semiconductor substrate; and a clad region defined by at least one clad layer ~~formed on the opposite side of the substrate not having~~ overlaying the ~~core region;~~ active layer,

wherein the core region has a gain [[area]] region with a length not smaller than 18 micrometers and not greater than 200 micrometers along an optical axis of at least the core region or the clad region; at least one of the core region and the clad region has a stripe shape with a ~~stripe~~ width [[is]] modulated in ~~the vertical~~ a direction ~~against~~ perpendicular to the optical axis ~~of at least the core region or the clad region and in the parallel direction with respect to the substrate surface;~~ such that the ~~stripe~~ width is narrower in the vicinity of [[the stripe]] ends of the gain region ~~is set narrower~~ than a

center portion thereof ~~cut-off width where a lateral mode is identical; and the lateral width in the horizontal direction has a portion within the gain region set wider than the cut-off width where the lateral mode is identical~~.

11. (Currently Amended) A semiconductor laser comprising: a semiconductor substrate; a core region defined by an active layer formed on one side of the semiconductor substrate; and a clad region defined by at least one clad layer ~~formed~~ at least ~~on the opposite side of the substrate not having~~ overlaying the ~~core region;~~ active layer,

wherein the core region has a gain [[area]] region with a length not smaller than 5 micrometers and not greater than 200 micrometers along an optical axis of at least the core region or the clad region; at least one of the core region and the clad region has a stripe shape with a ~~stripe~~ width [[is]] modulated in ~~the vertical~~ a direction ~~against~~ perpendicular to the optical axis ~~of at least the core region or the clad region and in the parallel direction with respect to the substrate surface;~~ such that the ~~stripe~~ width is narrower in the vicinity of [[the stripe]] ends of the gain region ~~is set narrower~~ than a center portion thereof ~~cut-off width where a lateral mode is identical; and the lateral width in the horizontal direction has a portion within the gain region set wider than the cut-off width where the lateral mode is identical~~.

12. (Currently Amended) The semiconductor laser as claimed in Claim 11, wherein the center portion within the gain region ~~set wider than the cut-off width where the lateral mode is identical is~~ forms a multi-lateral-mode waveguide.

13. (Currently Amended) The semiconductor laser as claimed in Claim [[11]]12, wherein the multi-lateral mode waveguide has a lateral width W and a waveguide length L decided so as to minimize a conversion loss accompanying mode conversion at [[the]] a junction between a waveguide mode of the multi-lateral mode waveguide and a waveguide mode of a lateral-mono mode waveguide which is optically connected to the multi-lateral mode waveguide.

14. (Currently Amended) The semiconductor laser as claimed in Claim [[11]]12, wherein [[the]] a lateral width W and [[the]] a waveguide length L of the multi-lateral mode

waveguide, an effective refractive index n of the multi-lateral mode [[laser]] waveguide, and an operation wavelength λ are decided so as to satisfy a formula as follows:

$$0.9\ nW^2/\lambda\ [[l]] \leqq L \leqq 1.1\ nW^2/\lambda.\ [[l]]$$

15. (Currently Amended) The semiconductor laser as claimed in Claim [[11]]12, wherein the multi-lateral mode waveguide has a lateral width W in a range from 3 to 10 micrometers.

16. (Original) The semiconductor laser as claimed in Claim 11, further comprising a reflection mirror formed by etching the clad region and the core region.

17. (Currently Amended) The ~~distribution return type~~ semiconductor laser as claimed in Claim [[11]]13, wherein a diffraction grating is formed in the lateral-mono mode waveguide portion [[and]] to provide a Bragg reflector therein ~~is formed~~.

18. (Cancelled)

19. (Currently Amended) The ~~wavelength changeable~~ semiconductor laser as claimed in Claim 17, wherein the Bragg reflector has a reflection wavelength changed by an external signal so as to artificially change the oscillation wavelength.

20. (Currently Amended) An optical module comprising at least an optical fiber for introducing light outside and a semiconductor laser that includes a semiconductor substrate; a core region defined by an active layer formed on one side of the semiconductor substrate; and a clad region defined by at least one clad layer ~~formed on the opposite side of the substrate not having~~ overlaying the ~~core region;~~ active layer,

wherein the core region has a gain [[area]] region with a length not smaller than 18 micrometers and not greater than 200 micrometers along an optical axis of at least the core region or the clad region; at least one of the core region and the clad region has a stripe shape with a ~~stripe~~ width [[is]] modulated in ~~the vertical~~ a direction ~~against~~ perpendicular to the optical axis ~~of at least the core region or the clad region and in the parallel direction with respect to the substrate surface;~~ such that the ~~stripe~~ width is narrower in the vicinity of [[the stripe]] ends of the gain region ~~is set narrower~~ than a

center portion thereof ~~cut-off width where a lateral mode is identical; and the lateral width in the horizontal direction has a portion within the gain region set wider than the cut-off width where the lateral mode is identical~~.